

What is claimed is:

1. A marker luminaire comprising:

5 a housing having an exterior and an interior;

a light emitting diode located in the interior of the housing;

10 a light scattering element optically coupled with the light emitting diode and communicating with the exterior of the housing for transmitting light over a broad angle viewing area; and

15 a low level energization circuit operably connected to the light emitting diode for causing the light emitting diode to luminesce at a level below a useful threshold of human photopic vision and above a threshold of scotopic vision.

2. A marker luminaire as set forth in claim 1, wherein the light emitting diode emits broad spectrum light.

20 3. A marker luminaire as set forth in Claim 2, wherein the light emitting diode is one of a class of super bright light emitting diodes exhibiting high light generating efficiency at luminescence levels below the threshold of human photopic vision.

4. A marker luminaire as set forth in claim 3, wherein the low level energization circuit includes 25 a battery.

5. A marker luminaire as set forth in claim 4, wherein the low level energization circuit includes an ambient light sensitive element for setting a level of current supplied to the light emitting diode.

30 6. A marker luminaire as set forth in Claim 5, further comprising a high level energization circuit for supplying a transient drive current to the light emitting diode sufficient to cause the

luminescence above a useful threshold of human photopic vision.

7. A marker luminaire as set forth in claim 6, wherein the high level energization circuit includes a radio transmitter.

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8. A marker luminaire as set forth in claim 4, the low level energization circuit further comprising:

10 a solid state switch operably coupled to the light emitting diode for controlling low level

energization of the light emitting diode; and

15 a photosensitive resistor coupled to the solid state switch to control the conductive state
thereof.

20 9. A marker luminaire as set forth in claim 8, further comprising:

an encoder and radio transmitter for a wireless doorbell;

25 a momentary switch connected to activate the encoder and radio transmitter; and

20 the encoder and radio transmitter being coupled to the light emitting diode for drawing
energization current through the light emitting diode at a level sufficient to cause the
light emitting diode to luminesce at a level perceptible by photopic vision.

25 10. A marker luminaire as set forth in claim 9, the housing further comprising:

an external button for actuating the momentary switch; and

30 an optical pathway between the light emitting diode and the exterior of the housing.

11. A marker luminaire as set forth in claim 8, the housing further comprising:

an upright translucent tube; and

5 a stake for placement into the ground supporting the upright translucent tube.

12. A marker luminaire as set forth in Claim 1, wherein the light emitting diode is one of a class of super bright light emitting diodes exhibiting high light generating efficiency at luminescence levels below the threshold of human photopic vision.

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13. A marker luminaire as set forth in claim 12, wherein the low level energization circuit includes a battery.

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14. A marker luminaire as set forth in claim 13, wherein the low level energization circuit includes an ambient light sensitive element for setting a level of current supplied to the light emitting diode.

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15. A marker luminaire as set forth in Claim 14, further comprising a high level energization circuit for supplying a transient drive current to the light emitting diode sufficient to cause the luminescence above a useful threshold of human photopic vision.

16. A marker luminaire as set forth in claim 15, wherein the high level energization circuit includes a radio transmitter.

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17. A marker luminaire as set forth in claim 14, the low level energization circuit further comprising:

a solid state switch operably coupled to the light emitting diode for controlling low level energization of the light emitting diode; and

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a photosensitive resistor coupled to the solid state switch to control the conductive state

thereof.

18. A marker luminaire as set forth in claim 17, further comprising:

5 an encoder and radio transmitter for a wireless doorbell;

a momentary switch connected to activate the encoder and radio transmitter; and

10 the encoder and radio transmitter being coupled to the light emitting diode for drawing energization current through the light emitting diode at a level sufficient to cause the light emitting diode to luminesce at a level perceptible by photopic vision.

19. A marker luminaire as set forth in claim 18, the housing further comprising:

15 an external button for actuating the momentary switch; and

an optical pathway between the light emitting diode and the exterior of the housing.

20. A marker luminaire as set forth in claim 17, the housing further comprising:

25 an upright translucent tube; and

a stake for placement into ground for supporting the upright translucent tube.

21. A marker luminaire as set forth in claim 17, the light scattering element including a panel bearing relatively opaque, intelligible symbols.

22. A marker luminaire as set forth in claim 4, further comprising a radio transmitter connected
30 to draw power through the light emitting diode.

23. A marker luminaire as set forth in Claim 13, further comprising a pull chain extending from the housing.

24. A marker luminaire as set forth in claim 4, the housing further comprising:

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an upright translucent tube; and

a stake for placement into the ground supporting the upright translucent tube.

10 25. A marker luminaire as set forth in claim 13, the light scattering element including a panel bearing relatively opaque, intelligible symbols.

26. A marker luminaire as set forth in Claim 4, further comprising:

15 internal circuitry; and

an external button for activating the internal circuitry.

27. A lamp comprising:

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a housing;

a battery located in the housing;

25 a light emitting diode in the housing, the light emitting diode being of a type exhibiting high efficiency in light generation across a substantial drive current operating range and with increasing intensity as drive current increases, and which emits light above a threshold of darkness adapted human vision and below a threshold of useful photopic vision;

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a light scattering element optically coupled to the light emitting diode for transmitting and

scattering light from the light emitting diode outside the housing; and

diode drive circuitry connected to the battery to draw power therefrom and further connected to the light emitting diode to deliver drive currents above the threshold of darkness adapted human vision but below the threshold of useful photopic vision.

5 28. A lamp as set forth in Claim 27, wherein the light emitting diode emits broad spectrum light.

10 29. A lamp as set forth in Claim 28, the diode drive circuitry further comprising:

15 a light sensitive element for reducing the level of the drive current to a negligible level in response to increasing ambient light; and

20 an optical opening through the housing allowing ambient light to reach the light sensitive element.

30. A lamp as set forth in Claim 27, further comprising a short range radio transmitter.

25 31. A lamp as set forth in Claim 30, wherein the short range radio transmitter is coupled to the energization circuit to draw current through the light emitting diode.

32. A lamp as set forth in Claim 31, wherein the light emitting diode emits broad spectrum light.

25 33. A luminaire comprising:

a housing;

30 a light scattering illumination source capable of producing light visible to a partially darkness adapted human eye at a minimal current mounted with respect to the housing to mark the location of the housing, when illuminated, over a wide viewing angle; and

an electrical energization circuit providing the minimal current to the lamp.

34. A luminaire as set forth in Claim 33, further comprising:

5 a radio frequency transmitter coupled for energization to the electrical energization circuit.

35. A luminaire as set forth in Claim 34, the light scattering illumination source further comprising a light emitting diode positioned in the housing and a light scattering element optically coupled to the light emitting diode.

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36. A luminaire as set forth in Claim 35, the light emitting diode being a broad spectrum light emitting diode.

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